

**REMARKS**

Claims 1, 2, 4-18 and 64-69 are pending in this application. By this Amendment, claims 1 and 12 are amended to recite features supported in the specification on page 23, line 8 – page 24, line 16. No new matter is added by any of these amendments.

Reconsideration based on the following remarks is respectfully requested.

**I. The Claims Satisfy the Requirements under 35 U.S.C. §112, first paragraph**

The Office Action rejects claims 1, 2 and 4-11 under 35 U.S.C. §112, first paragraph, based on lack of enablement. This rejection is respectfully traversed.

Subject matter to which claims 1, 2 and 4-11 pertain is supported in the specification at pages 22-28 and Fig. 2. Additionally, 1 has been amended to obviate this rejection in view of the Examiner's helpful comments. Withdrawal of the rejection under 35 U.S.C. §112, first paragraph is respectfully requested.

**II. The Claims Satisfy the Requirements under 35 U.S.C. §112, second paragraph**

The Office Action rejects claims 1, 2 and 4-11 under 35 U.S.C. §112, second paragraph, as being indefinite. Claim 1 has been amended to obviate this rejection in view of the Examiner's helpful comments. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph is respectfully requested.

**III. Claims 1, 2, 4-18 and 64-69 Define Patentable Subject Matter**

The Office Action rejects claims 1, 2, 4-18 and 64-69 under 35 U.S.C. §103(a) over U.S. Patent 5,329,207 to Cathey *et al.* (hereinafter "Cathey") in view of U.S. Patent 5,200,630 to Nakamura *et al.* (hereinafter "Nakamura"). This rejection is respectfully traversed.

Cathey and Nakamura do not teach or suggest a method of forming a crystalline film, including setting a substrate in a chamber, the substrate having a thin film on a surface of the substrate, a portion of a wall of the chamber being projected in a direction orthogonally

outward from the substrate, a window being provided at a top surface of the projected portion of the wall, the chamber extending along at least one direction parallel to the surface of the substrate, the projected portion of the wall being above the top of the chamber, applying energy through the window to a surface layer of the thin film, melting at least the surface layer of the thin film under a mixed gaseous atmosphere by the applied energy; and crystallizing at least the surface layer of the thin film, as recited in claim 1.

Also, Cathey and Nakamura, alone or in combination, fail to teach or suggest a method of forming a crystalline film, including setting a substrate in a chamber, the substrate having a thin film on a surface of the substrate, a window being provided near a side wall of the chamber, the window being disposed orthogonally outward from the surface of the substrate above a top of the chamber, the chamber extending along at least one direction parallel to the surface of the substrate, applying energy through the window to a surface layer of the thin film with a normal direction of the thin film shifted by an angle from a direction of an irradiation path, melting at least the surface layer of the thin film under a mixed gaseous atmosphere by the applied energy, and crystallizing at least the surface layer of the thin film, as recited in claim 12.

Instead, Cathey discloses a method for producing an electrode baseplate 21. In particular, Cathey teaches a silicon substrate 11 deposited with a conductive material layer 12 with atmospheric pressure support structures 18 between a phosphor coated screen 16 and the baseplate 21 (col. 4, lines 11-30 and Fig. 1 of Cathey).

Moreover, Nakamura discloses a method to produce a semiconductor layer 3 of polycrystalline silicon. In particular, Nakamura teaches a chamber 51 in which a vacuum is drawn and hydrogen gas is introduced through an inlet 60. Nakamura also teaches generating hydrogen plasma between electrodes 55 and 56 (col. 4, lines 33-64 and Fig. 6 of Nakamura).

Consequently, Applicants respectfully submit that neither Cathey nor Nakamura teaches or suggests a chamber for producing a crystalline film on a substrate, the chamber extending parallel to the substrate. Additionally, Applicants respectfully assert that both Cathey and Nakamura fail to teach the chamber as having a window at a top part of the chamber wall that projects orthogonally outward from the substrate.

Further, there would have been no motivation to combine features related to the electrode baseplate of Cathey with the vacuum chamber of Nakamura, nor has the Office Action established sufficient motivation for a *prima facie* case of obviousness. Even assuming that motivation to combine the applied references is established, the combination fails to teach or suggest Applicants' current combination of claimed features.

A *prima facie* case of obviousness for a §103 rejection requires satisfaction of three basic criteria: there must be some suggestion or motivation either in the references or knowledge generally available to modify the references or combine reference teachings, a reasonable expectation of success, and the references must teach or suggest all the claim limitations (MPEP §706.02(j)). Applicants assert that the Office Action fails to satisfy these requirements with Cathey and Nakamura.

For at least these reasons, Applicants respectfully assert that independent claims 1 and 12 are now patentable over the applied references. The dependent claims are likewise patentable over the applied references for at least the reasons discussed as well as for the additional features they recite. Consequently, all the claims are in condition for allowance. Thus, Applicants respectfully request that the rejection under 35 U.S.C. §103 be withdrawn.

#### **IV. Conclusion**

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Gerhard W. Thielman  
Registration No. 43,186

JAO:GWT/gwt

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**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

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